

RE-Print SPLIT-2

Work Order ID 110953

110953

Page 1

Friday, May 09, 2014 12:55:30 PM

Item ID: D4093-3

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Bracket

Start Date: 1/8/2014 Start Qty: 20.00

20

10

Cust Item ID:

Required Date: 1/8/2014 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan:

CX

Date: 1/10/09

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D4093

D

110

0.00

110

Waterjet

Memo

0.00

FLOW CNC Waterjet

CUT AS DWG

DWG REV:

PROG REV:

ISSUE PO

P10. 2304

POSSIBLE SUPPLIER: LOEBSACK WATERJET

HOLES WILL BE MADE ON MILLING

****DEBURR****

CX 1/10/09 20

115

Receive & Inspect for Damage & Mat'l Certs

0.00

115

Packaging

Memo

0.00

Packaging

1/11/09 (20)

Work Order ID 110953***110953***

Page 2

Friday, May 09, 2014 12:55:30 PM

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N900040100Setup Start ***NS1***

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Stop ***NS2***

Item Name: Bracket

Start Date: 1/8/2014 Start Qty: 20.00

20

Cust Item ID:

Required Date: 1/8/2014 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

125

QC6- Inspect dimensions to drawing

0.00

125

QC

Memo

0.00

Quality Control

OK 14/08/18

10

0

126

0.00

126

Small Fab

Memo

0.00

Small Fab

DEBURR A/R

10

0

J.C.L. / pmf

130

0.00

130

Mill Conv

Memo

0.00

Conventional Milling Machine

DRILL AND C'SINK AS PER DWG

10

0

J.C.L. / pmf
14/08/18

Work Order ID 110953

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Page 3

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Setup Start

NS1

Revision ID:

Stop

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Start Qty: 20.00

20

Cust Item ID:

Required Date: 1/8/2014

Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

132

QC2- Inspect parts off machine FAI/FAIB

0.00

132

QC

Memo

0.00

Quality Control

10 ϕ 50.4 / 17
14/05/18

135

QC8- Inspect parts - second check

0.00

135

QC

Memo

0.00

Quality Control

10 ϕ DAS 37 9-89
14.05.17

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.00

Hand Finishing

10 HandFinish

Work Order ID 110953

Friday, May 09, 2014 12:55:30 PM

110953

Page 4

Item ID: D4093-3

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bracket

Start Date: 1/8/2014

Start Qty: 20.00

20

Cust Item ID:

Required Date: 1/8/2014

Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

QC7-Inspect Chemical Conversion Coat

0.00

160

QC

Memo

0.00

Quality Control

10 *14/08/19*

170

Identify as per dwg & Stock Location: *5T245*

0.00

170

Packaging

Memo

0.00

Packaging

10X 20X *DAS 28 9-89*

AUG 21 2014

180

QC21- Final Inspection - Work Order Release

0.00

180

QC

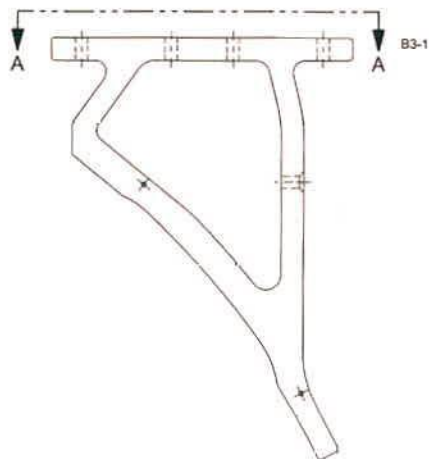
Memo

0.00

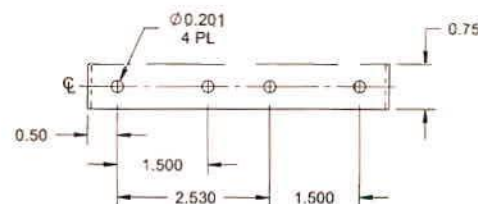
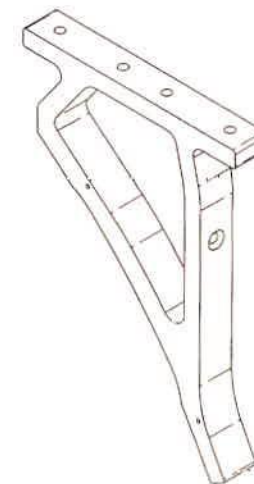
Quality Control

ML 14-08-21

4-8-21



CLM105109
W/O: 110953



SECTION VIEW A-A D6-1

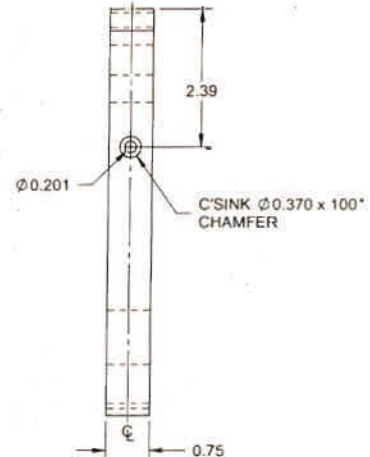
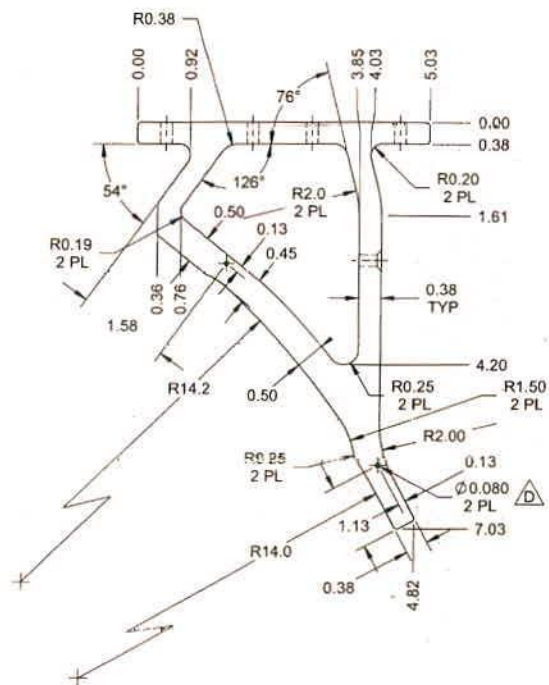
RELEASED
2012-10-31

NOTES:

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221
OR 6061-T6/T62 ALUMINUM SHEET
PER QQ-A-250/11 OR AMS-QQ-A-250/11
OR AMS 4025 OR AMS 4027
OR ASTM B209
REF DART SPEC. M6061T6B/M6061T6S
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.55 lbs

D4093-1 BRACKET

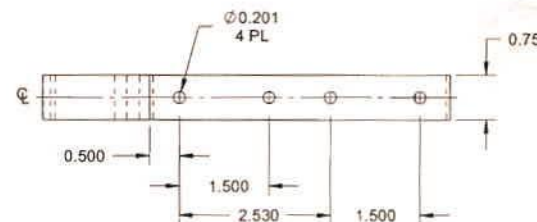
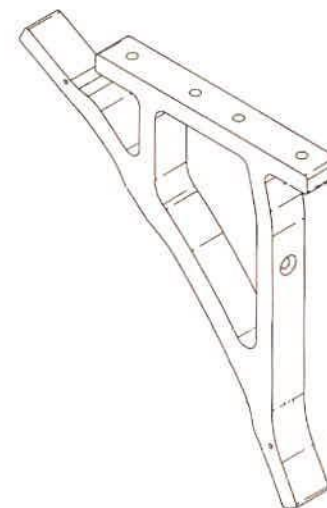
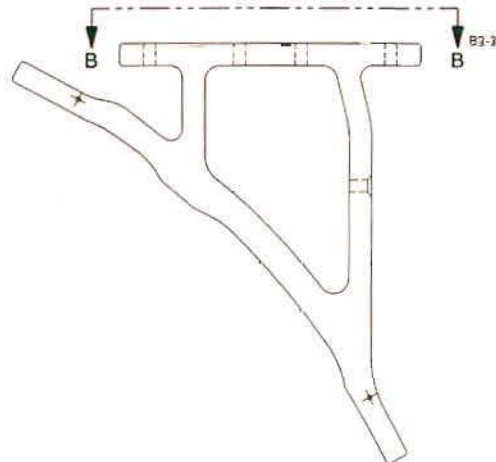
D	ADD Ø0.080 HOLES (ZN B5-2, B5-4)	RF	12.09.18
C	REDRAWN D4093-1/3 (ZN B4-1, B4-2); ADD MATERIAL NOTES (ZN A8-1, A8-3, A8-5)	RF	11.07.27
B	REDRAWN D4093-1/3 (ZN B4-1, B4-2)	RF	11.01.31
A	NEW ISSUE	RF	10.09.16
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. D
MFG. APPR.	<i>[Signature]</i>	D4093	SHEET 1 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	BRACKET	NTS
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DATE	12.09.18		



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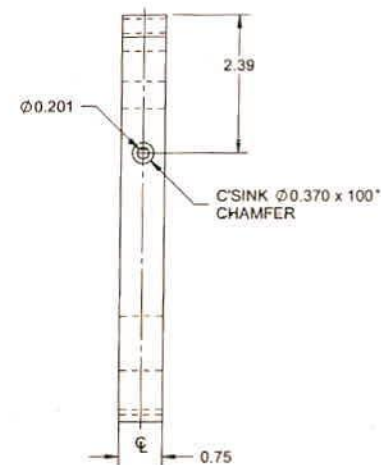
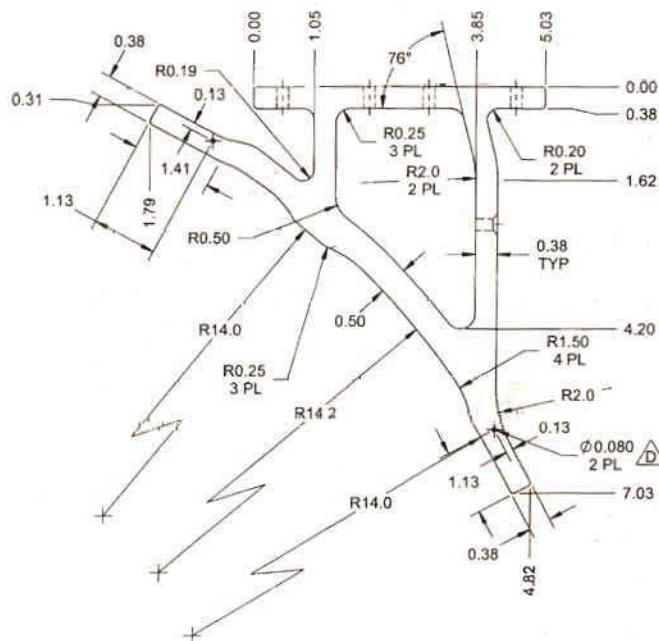
SECTION VIEW B-B B5-3

NOTES:

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
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- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.64 lbs*

RELEASED
2012-10-31
AM

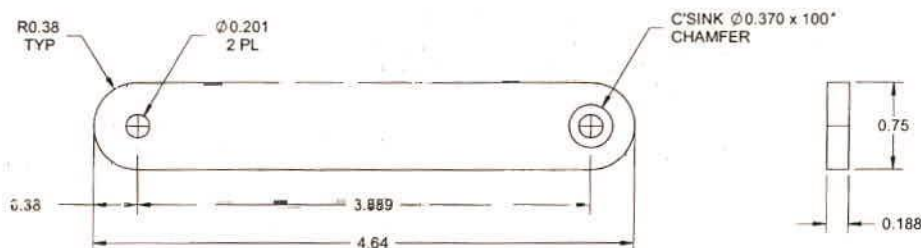
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CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. D
MFG. APPR.	<i>[Signature]</i>	D4093	SHEET 3 OF 5
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D4093-3 BRACKET

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APPROVED	<i>[Signature]</i>	TITLE	SCALE
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D4093-5 BRACKET

NOTES:

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
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OR ASTM B211 OR ASTM B221
OR 6061-T6/T62 ALUMINUM SHEET
PER QQ-A-250/11 OR AMS-QQ-A-250/11
OR AMS 4025 OR AMS 4027
OR ASTM B209
REF DART SPEC. M6061T6B/M6061T6S
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.06 lbs

RELEASED
2012-10-31

DESIGN	RF	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO. D4093	REV. D SHEET 5 OF 5
MFG. APPR.	<i>[Signature]</i>	TITLE BRACKET	SCALE NTS
APPROVED	<i>[Signature]</i>	<small>COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMERCE UNLESS SO SPECIFIED BY DART AEROSPACE USA, INC.</small>	
DE APPR.	<i>[Signature]</i>		
DATE	12.09.18		



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

OUTSTANDING PO REPRINT

Purchase Order ID PO23011

Purchase Order Date 2/14/2014

PO Print Date 5/9/2014

Page Number 3 of 7

Order From : VC-LWC001
LOEBSACK WATERJET CANADA LTD.
55 NORTHFIELD DR. E.
P.O.BOX 339
WATERLOO, ONTARIO N2K 3T6

Ship To : DART AEROSPACE LTD
1270
ABERD
EEN
HAWKE
SBURY,
ON
K6A
1K7
CANAD
A

Contact Name		Buyer	Michael Gregoire
Vendor Phone	519-570-6593	Customer POID	
Vendor Fax	519-893-4552	Customer Tax #	10127-2607
Ship To Contact		Terms	Net 30
Ship To Phone		Currency	CAD
Ship Method	FedEx PI collect	FOB	FCA - (Free Carrier)
Ship Acct			

Line Nbr	Item ID Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable	Req Qty	Extended Price
6	D2803-1P	Bracket	4/4/2014 Yes 5/7/2014	12.00 Each	\$1,102.20
Manufacture as per drawing D2803 rev.B B112380					
Line Total:					\$1,102.20
10	D4093-3P	Bracket	4/4/2014 Yes 5/7/2014	10.00 Each	\$239.50
Manufacture as per drawing D4093 rev.d B110953					
Line Total:					\$239.50

PO Instructions: PROCUREMENT QUALITY CLAUSES
A005 RIGHT OF ENTRY
A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)
A012 CHEMICAL AND PHYSICAL TEST REPORTS
A016 PERSONNEL QUALIFICATION
A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)
A026 CERTIFICATION OF MATERIAL CONFORMANCE



55 Northfield Dr., E., Box 339
Waterloo, On. N2K 3T6
(519)570-6590
F. (519)893-4252

Certificate of Compliance

Sold To: DART Aerospace

Purchase Order Nu ID PO23011

Item	Quantity	Part Number	Revision	Description	Mtl. / Thk.	HT Number
6(19)	12	D2803-1	b	BRACKET	6061-T6 / 0.50"	11/12/168D0
23(20)	12	D2803-2	b	BRACKET	6061-T6 / 0.50"	11/12/168D0
5(18)	12	D2804-1	c	BRACKET	6061-T6 / 0.50"	11/12/168D0
4(17)	12	D2804-2	c	BRACKET	6061-T6 / 0.50"	11/12/168D0
10(9)	10	D4093-3	d	BRACKET	6061-T6 / 0.750"	22/11/036D6
20(6)	30	D3065-5	b	STEP LEG	5052-H32 / 0.080"	3C529#2
24(24)	24	D2561P	b	LUG	6061T6 / 0.25"	08/11/010D6
3(18)	150	D2838	c	CLAMP	304 SS / 0.063"	A1303988
17(16)	60	D2519	d	CLAMP	304 SS / 0.063"	A1303988
2(17)	40	D3414-1F	c	CLAMP	304 SS / 0.100"	500400
15(14)	60	D4149-1	c	CROSSTUBE LUG	304 SS / 0.120"	350420
12(11)	40	D4150-3	b	ARM PLATE	304 SS / 0.120"	350420
13(12)	40	D4151-1	c	L HARDPOINT PL	304 SS / 0.120"	350420
14(13)	40	D4515-3	c	U HARDPOINT PL	304 SS / 0.120"	350420
16(15)	40	D4148-1	c	CROSSTUBE LUG	304 SS / 0.120"	350420

This is to certify that the whole of the supplies detailed hereon has been inspected, tested, packed, and unless otherwise stated, conform in all respects with the requirements of the contract or order.

Name: Derek Loebsack

Title: President

Sign:

Dated:

05-01-14

THYSSENKRUPP MATERIALS NA

J.M. WOODTURNING LTD

ALUMINUM PLATE 6061-T651
750" THK 48.5000" X 96.5000"
PART NO.

PO/Rel VERB DEREK

We certify that this is a true copy of the report
furnished by the producer of the metal, or data
resulting from tests made in approved labs.

Signe

Mill Test Results

74683-003

29Apr14

Pg 1/1

D4693

TEST CERTIFICATE

Certificate No : 1311LB3491

BUYER: THYSSENKRUPP MATERIALS NA 2821 LANGSTAFF ROAD CONCORD ONTARIO	Shipping File No: UR47568 Lot No : 22/11/03806 P/List No : 2/1308507 Release No : RF118853	Product: PLATE HEAT TREATED UNISHED, 6061-TB51 0.75"(±0.0311-0) x 48.5" x 96.5" Dimension : 0.75" X 48.5" X 96.5" Alloy - Temper : 6061 - T651
	Cust Order No : PEC-253126 HULAMIN Order No : 334883E Item Part : 1/1	Certificate No : 1311LB3491 Cust Ref/Part No: Combined P/List No : R144406

Case No : PHE243/PHE247

MECHANICAL TEST RESULTS

Lot No.	Cast No.	Metal Id	Alloy	Spec No	Mechanical Properties							
					Yield Strength (Ksi)	UTS (Ksi)	Elongation A50 (%)	Earing (%)	Test Date	Gauge Length (Inches)	Bend Test	Actual Gauge (Inches)
Spec				Min	35.1	42.0	9					0.75
				Max								0.781
22/11/03806	VSHIP	13-67125027	6061	1	39.9	46.1	15		05/11/13	2		0.765
				2	39.9	46.1	15		05/11/13	2		0.765

CHEMICAL COMPOSITION

	Cast No.	Alloy	Si (%)	Fe (%)	Cu (%)	Mn (%)	Mg (%)	Cr (%)	Zn (%)	Ti (%)	Each (%)	Total (%)	Al (%)
Min			0.40		0.15		0.8	0.04					
Max			0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.15	
	VSHIP	6061	0.66	0.42	0.28	0.11	1.06	0.18	0.03	0.011			97.21

CONFORMS TO: ASME SB-269 ASTM B209/10 AMS 4027M AMS-QQA-250/11, 08.1997

For purposes of determining conformance with these specifications, an observed value or a calculated value shall be rounded "to the nearest unit" in the last right-hand digit used in expressing the specification limit, in accordance with the rounding method of ASTM Practice E29, for Using Significant Digits in Test Data to Determine Conformance with Specifications.

WE HEREBY CERTIFY, THAT THE MATERIAL DESCRIBED ABOVE HAS BEEN TESTED AND COMPLIES WITH THE TERMS OF THE ORDER CONTRACT. THE INSPECTION RESULTS INDICATED IN THE CHEMICAL COMPOSITION HAVE BEEN OBTAINED FROM CAST ANALYSIS.

Dr. A. Pitchford (HEAD OF CHEMICAL TESTING)

Ver 2.8.4

V. Maritz (HEAD OF PHYSICAL TESTING)

Printed Date : 27 Jan 2014

Melted, cast, rolled and processed in South Africa - meets Requirements of RoHS and REACH

1 of 1

